Contributions from the Department of Biology, University of Western Australia. No. 5.

Description of a new Species of Uroctena from South-Western Australia, by **George E. Nicholls,** D.Sc., F.L.S., Professor of Biology in the University of Western Australia.

(*Read* July 13, 1926. *Published* July 20, 1926.)

While the plates were in preparation for my paper on the genus *Uroctena*, read at the recent meeting of this Society, I chanced to obtain a number of specimens of yet another species of fresh water Amphipod, referable to this genus. It may be readily distinguished from those previously described by the possession of well developed eyes and the much less strongly developed second antenna.

The species is named in compliment to Mr. H. C. Yelland, M.L.C., in whose company this particular collecting expedition was made and to whose most enthusiastic assistance on several recent occasions I am much indebted.

Uroctena yellandi sp. nov.

Plate XIV. Figs. 1-10 and Text Fig.

Specific diagnosis.—Near to *U. affinis* but with conspicuous white eyes. Segments 2-5 of the pleon with long delicate setae. a lateral tubercle near margin of pleon segments 1-3, the urus with laterally placed spinous setae.

Antenna 1 nearly three fourths the length of the body; accessory flagellum with four to six joints.

Antenna 2 only moderately stout in the male, flagellum ten jointed relatively longer than in *U. westralis*. Each segment with a terminal ring of fine setae, the terminal joint of the peduncle with four such rings of setae. The appendage is shorter and more slender in the female.

Gnathopod 2 differing from gnathopod 1 little in size or shape in the female, but in the male much larger. The armature of spines on inner aspect of the basos of gnathopod 2 little devel-

oped; more distal joints not markedly setose; distal lobe on carpus very large, widely separating meros from propod and masking the sub-triangular shape of the joint; propod relatively longer and narrower, palm convex with more regular lobing and marked off from convex posterior border of joint by a pair of large spines between which the tip of the dactyl is received.

Two or three of the peraeopods bear simple (unbranched) accessory branchiae; the dactyl may bear a feebly developed sensory seta.

Uropod 3, with basal joint as long (male) or longer (female) than broad; inner ramus small, with two or three terminal spines outer ramus not markedly elongated, 2 jointed, with the usual comb-like plate on proximal joint in the male; both joints with spines and long setae.

Telson slightly broader than long, scarcely as long as peduncle of uropod 3, cleft for three fifths of its length, a small basal portion bent at an angle to the rest of the piece. The distal lobes are truncate set with a number of long setae and two or three quite stout spines, each notched and with a cilium.

Length.—Not exceeding eight millimetres; females somewhat shorter.

Colour.—In life, palely brown, translucent; in spirit, straw coloured to white. The large chalk-white eyes readily distinguished, even in preserved material.

Habitat.—Found in a creek some miles south of Armadale, harbouring under stones and in tufts of grass. About three dozen specimens, of which almost all were females, were taken on June 28 of this year.

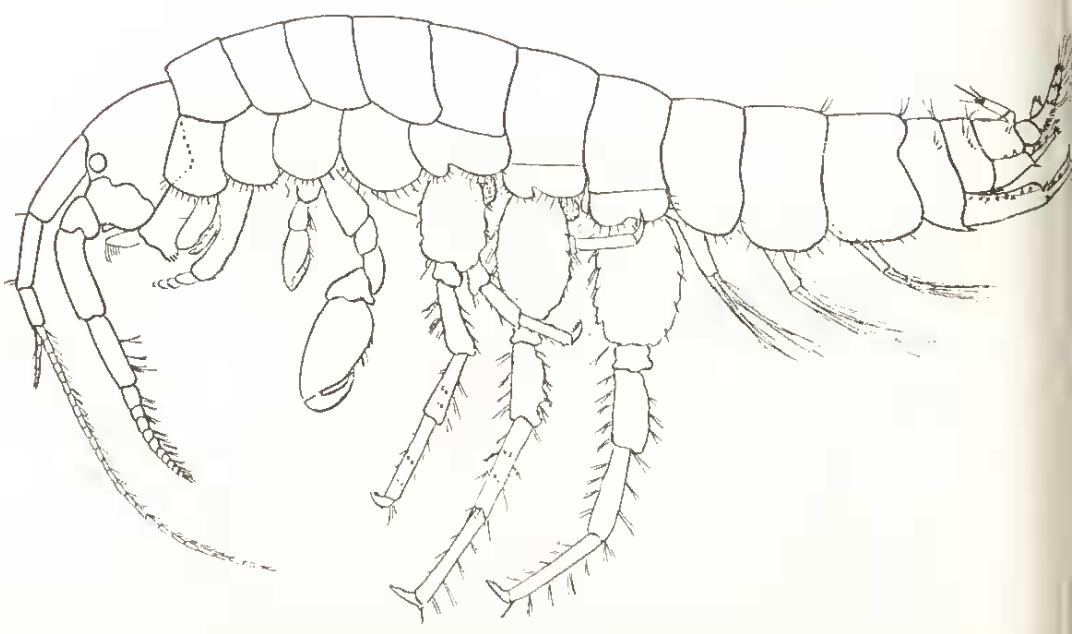

FIG. 1.—*Uroctena yellandi*, male. Side view of whole animal.

Remarks.—In the retention of large and conspicuous eyes, this species appears to be more primitive than the other members of the genus. Associated with this character is the more moderate development of the 2nd antennae (Text Fig. and Pl. XIV, Figs. 2, 2a) which are scarcely stouter than the first antennae in the male, while in the female they are more slender. Nor is there any marked development of the setae such as is found in the blind *U. setosa.*

Accessory gills are present, as in all members of this genus, but are small and apparently unbranched. The armature of spines upon the basos of the second gnathopod in the males of *U. westralis* and *U. affinis* is much less prominent in *U. yellandi* (Pl. XIV, Fig. 5) but upon the inner face of the first joint of the peduncle of the first antenna (Pl. XIV, Fig. 1a) as also upon the carpus of the first gnathopod (Pl. XIV, Fig. 3) and in several of the joints of 3rd, 4th and 5th peraeopoda there is a somewhat similar arrangement of spines.

In other respects, however, the first gnathopod (Pl. XIV, Figs. 3, 4) is much as in *U. westralis*; the propod of the second gnathopod (Pl. XIV, Fig. 5) is more slender than in *U. affinis* and has a pair only of spines, as in *U. setosa,* to receive the tip of the dactyl.

In the female the difference in size of the "hands" (Pl. XIV, Figs. 4, 6) of the first and second gnathopods is but little marked.

The third uropods (Pl. XIV, Figs. 7, 8) are relatively shorter and broader than in the other species, but are perhaps rather more setose. In the male, however, the seta-bearing expansion may have as few as nine setae, a smaller number than is found in any other species.

The telson (Pl. XIV, Fig. 9) is rather shorter and broader and more deeply cleft than in *U. setosa;* rather less deeply cleft and relatively longer than in *U. westralis* and *U. affinis* and distinctly more setose terminally than either of those species.

Upon the whole, it seems to occupy a position intermediate between *U. setosa* on the one hand and *U. affinis* and *U. westralis* on the other. Indeed it is probable that it differs very little from the form from which the three blind or purblind forms have been derived.

LIST OF REFERENCES.

1925 Chilton, Chas., Journ. Roy. Soc. W.A., Vol. XII, 1925.

1926 Nicholls, G. E., Journ. Roy. Soc. W.A., Vol. XII, 1926 (in the press).

EXPLANATION OF PLATE XIV.

(All figures of *Uroctena yellandi* sp. nov.)

Fig. 1 First antenna (part)

Fig. 1a Inner aspect of the basal joint of the same more highly magnified.

Fig. 2 Second antenna

Fig. 2a Second antenna (same magnification as fig. 2).

Fig. 3 Carpus and "hand" of gnathopod 1

Fig. 4 Carpus and "hand" of gnathopod

Fig. 5 Gnathopod 2, with side plate and branchiae

Fig. 6 Carpus and hand of gnathopod 2

Fig. 7 Third Uropod

Fig. 8 Third Uropod

Fig. 9 Telson dorsal view, highly magnified.

Fig. 10 Dactyl of peraeopod 4, showing slight development of sensory seta.

Printed for the Royal Society of Western Australia by R. S. Sampson, 971-973 Hay Street, Perth.